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EXAMINER

DOAN, PHUOC HUU

ART UNIT PAPER NUMBER

2617

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,403

Applicant(s)

JANG, MIN

Examiner

PHUOC H. DOAN

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-47 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 37 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claim 37, Applicant's amended to claim such as "transmitting a message for display on the radio device indicating that said at least one service will be limited" was not described in the specification. The correction is required in appropriate.

As to claim 38, Applicant's amended to claim such as "wherein said limiting includes limiting a terminating call service to the radio device to prevent connection of the call to the called party terminal based on the result of the comparison". The correction is required in appropriate.

Response to Arguments

2. Applicant's arguments filed 06/29/06 have been fully considered but they are not persuasive.

Applicant's remarks: These features are not taught or suggested by Hogan and Kido such as "service limit information ... in a network circuit based on preferences of a user of the radio device," and that this service limit information "designates at least one location pre-selected by the user within which said at least one service is to be limited."

Examiner's response: Hogan in view of Kido, Hogan clearly discloses service limit information (page 3 through page 4, par. [0032-0033] that specific storing service **limit, restriction information** in the radio network that determined whether to perform a location area, cell involving the core network when entering a cell in a new location area)... in a network circuit based on preferences of a user of the radio device (page 4, par. [0034] **the mobile terminal may optionally created a temporary list** of allowed or forbidden location areas when it receives LA (location area) information from the core network in response to LA update requests. **The mobile stores this information in its temporary LA list by the user of a mobile terminal).**

Applicant' remarks: Hogan does not store service limit information for one or more location in a mobile network " based on preferences of a user of the radio device" where the service limit information "designates at least one

location pre-selected by the user within which at least one service is to be limited”.

Examiner’s response: Hogan in specifically discloses the method and apparatus for location area in allowed or limit areas on the mobile network based on preferences of a user of the radio device (page 4, par. [0034]) has described above, and where the service limit information “designates at least one location pre-selected by the user within which at least one service is to be limited (page 4, par. [0033-0034]. For example, designates at least one location pre-selected by the users that are LA1, and LA2, LA1 is limit service, LA2 is allowed service, and the user of mobile may create a temporary list of allowed or limit area service in to mobile device).

Applicant’s remarks: Kido does not disclose that the registered area information is stored “based on preferences of a user of the radio device and that this service limit information “designates at least one location pre-selected by the user within which at least one service is to be limited”.

Examiner’s response: Applicant was missed the interpretation of the reference of Kido, Kido disclose not only performing a handoff in a mobile communication network but more specific for location-limited mobile

stations. In combined, Kido disclose that comparing a location of a radio device to the stored information which has the limitation relevant to Hogan. Hogan clearly discloses service limit information (page 3 through page 4, par. [0032-0033] that specific storing service **limit, restriction information** in the radio network that determined whether to perform a location area, cell involving the core network when entering a cell in a new location area)... in a network circuit based on preferences of a user of the radio device (page 4, par. [0034] **the mobile terminal may optionally created a temporary list** of allowed or forbidden location areas when it receives LA (location area) information from the core network in response to LA update requests. **The mobile stores this information in its temporary LA list by the user of a mobile terminal).**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **1-2, 4-5, 7-19, 21-23, 25-29, 31-32, 35-40, and 45-47** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hogan (US Pub No: 2003/0040314)** in view of **Kido (US Patent No: 6,947,745)**.

As to **claim 1**, Hogan discloses a method comprising: storing service limit information for one or more locations in a mobile network (col. 4, par. [0033]); limiting at least one service “**location area access restriction**” to a radio device according to the location of the radio device (col. 3 through col. 4, par. [0032-0034]) and designates at least one location pre-selected by the user within which said at least one service is to be limited (page 4, par. [0034], page 5, par. [0045] “based on the system information, the message is transmitted via the base station over a broadcast channel for the new cell being considered for selection by the mobile terminal”) . However, Hogan does not disclose that comparing a location of a radio device to the stored information; and limiting at least one service to the radio device based on a result of the comparison, wherein the service limit information is stored in a network circuit based on preferences of a user of the radio device.

In the same field of invention, Kido specifically discloses that comparing a location of a radio device to the stored information (col. 14, lines 7-17); and limiting at least one service to the radio device based on a result of the **comparison**

“col. 11, lines 43-48”, wherein **the service limit information is stored in a network** circuit based on preferences of a user of the radio device (col. 11 through col. 12, lines 27-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the service limit information is stored in a network as taught by Kido to the system of Hogan in order to limit an incoming message when mobile device on the limited areas.

As to claim 2, Hogan further discloses the method of claim 1, wherein the radio device is a mobile station (col. 1, par. [0002]).

As to claim 4, Hogan further discloses the method of claim 1, wherein the network circuit includes a mobile communication exchange (col. 4, par. [0038], col. 5, par. [0041-0042]).

As to claim 5, Hogan further discloses the method of claim 4, wherein the mobile communication exchange comprises at least one of a packet exchange and a circuit exchange (col. 4, par. [0038], col. 5, par. [0041-0042]).

As to claim 7, Hogan further discloses the method of claim 4, wherein: the mobile communication exchange is coupled to a home location register (**“ in handling mobile terminal registrations”** col. 2, par. [0009-0010]); the mobile communication exchange is coupled to a universal terrestrial radio network (col. 4, par. [0039]); and the mobile communication exchange is coupled to one of a public

switched telephone network and an Internet protocol network (“**internet provided by IP connectivity**” col. 4, par. [0038-0039]).

As to claim 8, Hogan further discloses the method of claim 7, wherein the mobile communication exchange is coupled to the Internet protocol network through a gateway GPRS support node (col. 4, par. [0038]).

As to claim 9, Hogan further discloses the method of claim 1, wherein said comparing includes comparing the location of the radio device with the stored information in a register of the network circuit (col. 5, par. [0045]), wherein the register comprises at least one predetermined relationship between the location of the radio device and limitations on at least one service to the radio device (col. 5, par. [0045]).

As to claim 10, Hogan further discloses the method of claim 9, wherein said limiting at least one service to a radio device according to the location of the radio device is in accordance with said at least one predetermined relationship comprised in the register (col. 4, par. [0034-0036]).

As to claim 11, Hogan further discloses the method of claim 9, wherein the register is a home location register (col. 2, par. [0009-0010]).

As to claim 12, Hogan further discloses the method of claim 1, wherein the location of the radio device is represented by at least one of: a location area

identifier (col. 2, par. [0015]; a service area identifier; and a routing area identifier (also see col. 5, par. [0042]).

As to claim 13, Hogan further discloses the method of claim 12, wherein: the location area identifier and the service area identifier are used for circuit service (col. 2, par. [0015, and col. 4, par. [0038]); and the routing area identifier and the service area identifier are used for packet service (col. 4, par. [0038], and col. 5, par. [0045]).

As to claim 14, 37, Hogan further discloses the method of claim 1, wherein prior to said limiting at least one service to the radio device (col. 3, par. [0032]), comprising: detecting a handover of the radio device to a new location (col. 4, par. [0033], and [0040]); and prior completing the handover to the new location (col. 4, par. [0034], informing a user of the radio device that at least one service to the radio device will be limited once the handover is complete (Detail col. 4, par. [0033-0036]).

As to claim 15, Hogan further discloses the method of claim 1, wherein said limiting is in accordance with a request from a user of the radio device to limit at least one service to the radio device according to the location of the radio device (col. 4, par. [0033-0034], and col. 5, par. [0044-0046]).

As to claim 16, Hogan further discloses an apparatus configured to implement the method of claim 1 (col. 5, par. [0041]).

As to claim 17, Hogan discloses an apparatus comprising (Fig. 7, par. [0041]), said subscriber service limitations designating at least one location pre-selected by a subscriber of the mobile station within which said service is to be limited (page 4, par. [0034], page 5, par. [0045]). However, Hogan does not disclose a home location register storing information “**col. 8, lines 23-29**” indicating predetermined relationships between limitations on subscriber services and locations of a mobile station (col. 10, lines 15-37); and a circuit which limits a subscriber service to the mobile station according to the information stored in the home location register (col. 10, lines 38-60), said subscriber service limitations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the information stored in the home location register as taught by Kido to the system of Hogan in order to limit an incoming message when mobile device on the limited areas.

As to claim 18, Hogan discloses a service control method using subscriber's location information for a mobile communication system comprising (col. 5, par. [0042]): registering information on a service limit according to a subscriber's location in a service profile of the subscriber during a service change or

subscription (col. 5, par. [0043]); and if a service request is received (col. 5, par. [0046]), limiting the service on the basis of the mobile terminal subscriber's location information using registered contents of the subscriber's service profile (col. 5, par. [0043-0047]) and the registered contents designates at least one location pre-selected by the user within which the service is to be limited (page 4, par. [0034], page 5, par. [0045]). However, Hogan does not disclose that subscriber service limitations being designated based on preferences of a user of the mobile station.

In the same field of invention, Kido specifically discloses that subscriber service limitations being designated based on preferences of a user of the mobile station (col. 11 through col. 12, lines 27-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the service limit is designated based on preferences of a user of the mobile terminal as taught by Kido to the system of Hogan in order to limit an incoming message when mobile device on the limited areas.

As to claim 19, Hogan further discloses the service control method of claim 18, wherein the subscriber's location information for limiting the service is expressed by a location area identifier (LAI) (col. 2, par. [0015]), a routing area

identifier (RAI) (col. 2, par. [0011]), and a service area identifier (SAI) (col. 2, par. [0012]).

As to claim 21, Hogan further discloses the service control method of claim 18, further comprising: if the mobile communication subscriber initially connects to a mobile communication network after the information on the service limit according to the subscriber's location is registered in the service profile of the subscriber (col. 1, par. [0007-0008]), transmitting the subscriber profile including service limit contents from a home location register to a mobile communication exchange to store the subscriber profile (col. 2, par. [0009-0012], and col. 5, par. [0044-0047]).

As to claim 22, Hogan further discloses the service control method of claim 18, further comprising, when the subscriber requests the service (col. 5, par. [0042]), transmitting service contents and the location information to a mobile communication exchange (col. 5, par. [0043]); comparing the transmitted service and a service request location with the service profile of the subscriber (col. 5, par. [0045]); and if the service limit contents according to the service request area coincide with each other, informing the service limit contents to the mobile terminal subscriber, and rejecting the service (col. 5, par. [0046]).

As to **claim 23**, Hogan further discloses the service control method of claim 18, further comprising, if a handover made by movement of the mobile terminal into a service limit area is produced while the subscriber is receiving the service (col. 1, par. [0007]), the steps of: sensing the handover (col. 1, par. [0007-0008]); detecting a target location of the handover (col. 2, par. [0009-0012]); checking whether the target location corresponds to the service limit location (col. 2, par. [0012-0014]); if the target location corresponds to the service limit area, informing the service limit area (col. 3, par. [0016]; and if the handover is made into the service limit area col. 4, par. [0033-0034]), informing the area in which the service is limited, and releasing the service (col. 5, par. [0042-0043]).

As to **claim 24, 25, 38**, Hogan disclose a service control method using subscriber's location information for a mobile communication system provided with a mobile terminal (col. 5, par. [0041-0042]), a home location register (HLR), and a mobile communication exchange (col. 5, par. [0043]), the method comprising: extracting a kind of a service requested during a service request and a location of a subscriber (col. 5, par. [0044-0045]); and limiting the service if a present location of the subscriber is included in a limited location of the extracted service (col. 5, par. [0045-0047]) wherein the limited location is pre-selected by the subscriber (page 4, par. [0034], page 5, par. [0045]). However, Hogan does not

discloses that registering a service limit according to the location information based on one or more preferences designated by the subscriber.

In the same field of invention, Kido specifically discloses that registering a service limit according to the location information based on one or more preferences designated by the subscriber (col. 11 through col. 12, lines 27-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide registering a service limit according to the location information based on one or more preferences designated by the subscriber as taught by Kido to the system of Hogan in order to limit an incoming message when mobile device on the limited areas.

As to **claim 26**, the combination of Hogan and Kido further disclose the service control method of claim 25, wherein said registering includes “col. 5, par. [0043] of Hogan”: storing contents of the service limit according to the location information in the HLR (col. 8, lines 23-25 of Kido); and if the subscriber's mobile terminal connects to a mobile communication network (col. 2, par. [0011] of Hogan), the mobile communication exchange reading out a service limit profile according to the location information from the HLR (col. 4, par. [0033-0039] of Hogan), the service limit profile designating the limited location pre-selected by the subscriber (page 4, par. [0034], page 5, par. [0045] of Hogan).

As to claim 27, this claim is rejected for the same reason as set forth in claim 25.

As to claim 28, Hogan further discloses the service control method of claim 25, wherein said limiting includes: the mobile communication exchange judging whether there is a location limit in the extracted service (col. 5, par. [0043]), and if it is judged that there is no location limit in the extracted service, normally processing the requested service (col. 5, par. [0045]); normally processing the requested service if there is the location limit in the extracted service, but the present location of the subscriber is not included in the limited location (col. 5, par. [0045-0046]); and reporting the service limit area and refusing the service if the present location of the subscriber is included in the limited location of the extracted service (col. 5, par. [0045-0047]).

As to claim 29, this claim is rejected for the same reason as set forth in claim 19.

As to claim 31, Hogan further discloses the service control method of claim 25, wherein during said extracting, the mobile terminal requests a service request message including variables required for the service (col. 5, par. [0041]), the kind of the service (col. 4, par. [0033]), and the location information to the mobile communication exchange during the service request (col. 5, par. [0046]).

As to claim 32, Hogan discloses a service control method using subscriber's location information for a mobile communication system provided with a mobile terminal (col. 5, par. [0041-0042]), a home location register (HLR), and a mobile communication exchange (col. 5, par. [0043]), the method comprising: detecting a handover target location of the subscriber who has registered the service limit according to the location information when the subscriber receives the service (col. 1, par. [0007-0008]); and releasing the service if a handover to the service limit area occurs (col. 1 through col. 2, par. [0007-0012]), wherein said preferences designate at least one location pre-selected by the subscriber within which the service is to be limited (page 4, par. [0034], page 5, par. [0045]) . However, Hogan does not disclose that registering a service limit based on one or more preferences designated by the subscriber.

In the same field of invention, Kido specifically discloses that registering a service limit according to the location information based on one or more preferences designated by the subscriber (col. 11 through col. 12, lines 27-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide registering a service limit according to the location information based on one or more preferences designated by the

subscriber as taught by Kido to the system of Hogan in order to limit an incoming message when mobile device on the limited areas.

As to claim 35, the combination of Hogan and Kido further disclose wherein the stored information is in a subscriber service profile held in a home location register (col. 8, lines 22-25, and lines 60-67 of Kido).

As to claim 36, the combination of Hogan and Kido further disclose wherein the stored information limits a service requiring receipt of a call from a third party while the radio device is in said one or more location (col. 10, lines 1-37 of Kido).

As to claim 39, Hogan further discloses transmitting a message to the called party terminal indicating that the radio device is limited from receiving the call (page 1, par. [0007]).

As to claim 40, Hogan further discloses all the limitation in page 5, par. [0045]).

5. Claims 3, 6, 20, and 30, 34, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of Kido and further in view of Kido and further in view of Vasa (US Patent No: 6,826,397).

As to claim 3, 34, the combination of Hogan and Kido discloses the method of claim 1, wherein said at least one service comprises at least one of: a circuit originating call **“a destination cell can support a connection to a user**

equipment unit at the same time the origination cell continues to service the connection” col. 1, par. [0005]; a circuit terminating call (col. 1, par. [0006-0007]); additional service (col. 1, par. [0003]); roaming service (col. 4, par. [0033]); a packet originating call (col. 4, par. [0038-0039]); and a packet terminating call (col. 4, par. [0038-0039]). However, Hogan and Kido do not specific disclose that originating short message service.

Vasa specific disclose that originating short message service (col. 3, lines 6-16, and col. 4, lines 15-30); terminating short message service (col. 3, lines 6-16, and col. 4, lines 15-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the short message service as taught by Vasa to the method of Hogan and Kido in order to have a short message service by originating or terminating service as provided by Vasa.

As to claim 6, the combination of Hogan and Kido disclose the method of claim 5, wherein: the packet exchange comprises a serving GPRS support node (col. 4, par. [0038]. However, Hogan and Kido do not specific disclose the circuit exchange comprises a mobile switching center and a visitor location register.

Vasa specific discloses the circuit exchange comprises a mobile switching center and a visitor location register (col. 3, lines 30-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to provide mobile switching center and a visitor location register as taught by Vasa to the method of Hogan and Kido in order to have a communication service by originating or terminating service as provided by Vasa.

As to claim 20, 41, this claim is rejected for the same reason as set forth in claim 3.

As to claim 30, 42, 43, 44, this claim is rejected for the same reason as set forth in claim 3.

As to claim 45, Hogan further discloses wherein said one or more types of services includes a service from a packet network (col. 4, par. [0038], col. 5, par. [0041-0042]).

As to claim 46, Hogan further discloses wherein the packet network service is a service originating from radio device (page 1, par. [0005]).

As to claim 47, Hogan further discloses wherein the packet network service is a service originating from another device attempting to establish call connection with the radio device (page 1, par. [0005], [0007]).

6. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of Kido as applied claim 33 above and further in view of **Rune (US Patent No: 6,212,390)**.

As to claim 33, the combination of Hogan and Kido do not disclose all the limitation in claim 1. However, Hogan does not specifically disclose the service control method of claim 32, further comprising the step of reporting in advance the subscriber of the service limit area if the target location moves to the service limit location before the third step.

Rune specifically discloses the service control method of claim 32, further comprising the step of reporting in advance the subscriber of the service limit area if the target location moves to the service limit location before the third step (col. 8, lines 19-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the service limit area if the target location moves to the service limit location as taught by Rune to the service control method of Hogan and Kido in order to tracking the target would be allowed to access or not as provided by Rune.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUOC H. DOAN whose telephone number is 571-272-7920. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GEORGE ENG can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Phuoc Doan
08/03/06


GEORGE ENG
SUPERVISORY PATENT EXAMINER